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## I.—ON ASSIMILATION AND ADAPTATION IN CONGENERIC CLASSES OF WORDS.

The twelfth volume of the American Journal of Philology (1891) contains in its opening pages (1-29) an article by the present writer, entitled 'On Adaptation of Suffixes in Congeneric Classes of Substantives.' This was followed in 1893 by a kindred investigation, 'On the Origin of the So-called Root-determinatives,' an abstract of which was printed in the Proceedings of the American Philological Association, Transactions, vol. XXIV, pp. xxvii ff.; a somewhat fuller presentation of the same subject was subsequently printed in Indogermanische Forschungen, IV 66-78. The object of the present article is to illustrate these matters by new materials and, in a measure, also by new points of view.

The subject in its broadest and at the same time simplest aspect may be put in the form of a query: What is the influence of the lexical value—as distinguished from morphological structure—of words and expressions upon one another, and what constructive power has this influence in shaping the broader categories of words and expressions? The answer is, Every word, in so far as it is semantically expressive, may establish, by hap-hazard favoritism, a union between its meaning and any of its sounds, and then send forth this sound (or sounds) upon predatory expeditions into domains where the sound is at first a stranger and parasite. A slight emphasis punctures the placid function of a certain sound-element, and the ripple extends, no one can say how far. The *t* of Latin *gustare*, by a delicate process of selection, is charged with the essence of the entire word, and is passed

on to its congener *taxare*, making Romance *tastare*.<sup>1</sup> Thus German *kosten* and *tasten* (English *taste*) now contain an element *t* that seems charged with an especial semantic mission, and the minds and mouths of speakers stand ready, upon renewed incitation, to extend the use of this *t* in the same direction. No word may consider itself permanently exempt from the call to pay tribute to some congeneric expression, no matter how distant the semasiological cousinship; no obscure sound-element, eking out its dim life in a single obscure spot, may not at any moment find itself infused with the elixir of life, until it bursts its confinement and spreads through the vocabulary a lusty brood of descendants.

Preparatory to a deepening discussion of the constructive force of the lexical or semasiological values, we may consider all the phenomena treated in these papers under two heads: 1) Congeneric words assimilate; 2) The signification of any word is arbitrarily attached to some sound-element contained in it, and then congeneric names are created by means of this infused or, we might say, irradiated, or inspired element. Only the second process is entitled to the name adaptation; the first may be called congeneric assimilation, or congeneric analogy. Italian *licorno* 'unicorn,' changed from *unicorno* by assimilation to its congener *lifante* = *elefante* 'elephant,'<sup>2</sup> is not as yet an exhibition of adaptation. But if the Italians had seized upon this element *li* as a general prefix which had become so far vitalized as to make it desirable or necessary to place it at the head of newly coined designations of animals, then *li* has become adapted. This is not a question of numerical relation, since the adaptation frequently extends but to a single case. So M. Bréal reports<sup>3</sup> that the organizers of certain public festivals in Nice promised the public that there should figure among the glories of the pageant not only *cavalcades*, but also *analcades*. Here the element *-alcades* has adapted itself to a certain sphere of action, though it shall never extend beyond this single new word, and perish with the breezy doings which begot it. Adaptation is active, aggressive, creative, at least semi-conscious; assimilation is dormant, passive, not necessarily conscious at all. A mere slip of the tongue in obedience to the faintest reverberation from the parent-word will change *unicorno* to *licorno*, produce dialectic English *ketch* from

<sup>1</sup> Cf. Indogermanische Forschungen, IV 70, note.

<sup>2</sup> See 'Adaptation,' p. 25, note 3.

<sup>3</sup> Mémoires de la Société de Linguistique, vol. VII, p. 24.

*catch* in deference to *fetch*, or will change the name of the city *Minneapolis* to *Minneannapolis* (as is sometimes heard), in deference to *Indianapolis*, *Annapolis*. Adaptation, on the other hand, may be positively reflective, as e. g. in the following extract, in which the struggle between silver and gold for the control of the currency of the United States has inspired the editor of the *Atlanta Constitution* (Dec. 13, 1892) to say: "If the *goldolaters* and the money power propose to control, that fact cannot be made apparent a moment too soon." The editor in question did exactly as the philosopher who coined *symbolatry* after *idolatry* (the latter *ειδωλολατρεία* changed by haplology). Chemists, manufacturers of quack medicines, inventors of new explosives etc., supported by the freemasonry of their respective classes and the acquiescent public, float their *-ites* and *-ates*, *-ides* and *-ades*, with dire intent: *terrorite* and *americanite* have been invented recently to match *dynamite*,<sup>1</sup> and one feels like drawing the curtain over the indecently profuse offspring of *vaseline*—the *rosalines*, the *bloomines*, the *fragelines* and the *nosulines*. The banality of these processes is offset by the startling subtleness of the categories which are accentuated by an adapted suffix: they are often the very stuff that dreams are made of. The sinister *electrocution* reminds us that the toddling onward steps of our civilization may yield us further a *\*hydrocution*, if perchance the theory that drowning is rather pleasant than otherwise should prevail. The London public and the London papers have created, of recent years, a suffix *-eries* (plurale tantum), designating public exhibitions. It appears to have started with the fisheries exhibition, which was called '*the fisheries*' for short; next came an exhibition of flowers, which required no violent adaptive process to be turned into '*the floweries*'; again, the hygienic or health exhibition became '*the healtheries*,' and finally the Colonial and Indian exposition appeared as '*the Colinderies*,' a word which, the purist would say, ought to turn the very printer's ink vermilion.<sup>2</sup>

I have mentioned in the past (Idg. Forsch. IV 71) that I frequently felt tempted to blend the two words *quench* and *squelch* in a composite result *squench*, and that my attention was afterwards drawn to a passage in Page's 'In Ole Virginia,' p. 53, presenting the word in dialect ('she le' me *squench* my thirst

<sup>1</sup> Cf. also *melinite*, *emmensite*, *gelbite*, *cresilite*, *panclastite*, *oxonite*, *glonoinite*.

<sup>2</sup> In New Haven, Connecticut, my colleague, Prof. Warren, informs me, the *engineers* of electric tram-cars have recently blossomed out as *motorneers*.

kissin' her hand'). Again, my attention has been drawn to the occurrence of the word in James Whitcomb Riley's 'Elf-child': 'an' the lightnin'-bugs in dew is all *squenced* away.' The slang word *swipe*, which is now heard often, is to my sense clearly a similar product of *wipe* and *sweep* and *swoop*. One can taste the ingredients. English *stodgy* is in sense a perfect reflection of *podgy* and *stolid*. One should note, in connection with all these products, the superior mobility and fusibility of the sound *s*: it stands ready to form a kind of an inverted affricative with every dental, and blends most readily with explosives, liquids and nasals. In my opinion the portentous number of I. E. word-couplets, one with and the other without *s*, cases like Goth. *stiur* : *taūros* ; *stéyos* : *réyos*, Lat. *tego* ; *σικρός* : *μικρός* ; Lith. *sparnas* : Sk. *parṇa* 'wing'; Engl. *mash* and *smash*, and countless others are, in part, exhibitions of this semantic mobility of *s*.<sup>1</sup> The sound is so lightly girded, so easily charged with faint symbolic meaning (cf. von der Gabelentz, Festgruss an Otto von Böhtlingk, pp. 26 ff.; Sprachwissenschaft, pp. 217 ff.), that it must have been added again and again in all periods of I. E. speech upon the slightest provocation, as the faintest echo of words of correlated meaning.

These phenomena are in close touch with reduplication. Reduplication in early glottogonic periods of language cannot have represented anything more than an attempt to make an idea tarry. It is a rudimentary rhetorical device. In historical periods of I. E. speech the habit ceases in general to be productive, just as the semantic value of the older reduplications is entirely lost. German *beben* and even Sk. *bibheti* contain no longer any trace of the early semasy of the reduplication; the reduplication is a fossil.<sup>2</sup> The productivity of language becomes

<sup>1</sup> Cf. KZ. II 264; Pott, Etymologische Forschungen, II 291; Curtius, Griechische Etymologie<sup>5</sup>, pp. 692 ff.; Meringer, Beiträge zur Geschichte der indogermanischen Declination, p. 43 (Proceedings of the Vienna Academy, vol. CXXV); Hoffmann, Bezz. Beitr. XVIII 155; Schrijnen, Étude sur le phénomène de l'*s* mobile dans les langues classiques, Louvain, 1891 (cf. Indogermanischer Anzeiger, I 109 ff.).

<sup>2</sup> In the Proc. Am. Or. Soc. for October, 1882 (Journal, vol. XI, p. cxxvi), I have drawn attention to a highly interesting survival of the original function of reduplication in a single present-system in the Veda. The case deserves more attention than it has as yet received. The root *bhar* 'carry' shows a distinct functional difference between its two stems *bhāra* and *bībhar*. The former is, in the terminology of Slavic grammar, 'perfective,' being regularly followed by the dative, and meaning 'convey'; the reduplicated stem *bībhar*,

'analytic' rather than 'synthetic,' and a set of analytic devices takes the place of the old synthetic reduplications. English *hurly-burly*, *fiddle-faddle*, *tittle-tattle*, *zig-zag*, *rogey-pogey*, Germ. *tick-tack*, *piß piß puff*, and the like, are the closest modern approaches to reduplication. English *spick and span*, *by hook and by crook*, *dance and prance*; Germ. *alt und kalt*, *knall und fall*, *auf schritt und tritt*, *träume schäume*, *ohne saft und kraft*, are in reality reduplicating devices. They are in every sense, too, devices, just as the old reduplication, profoundly influential in shaping both form and meaning. In *recht und schlecht*, *schutz und trutz*, the singleness of the expression is now absolutely established and guaranteed, because *schlecht* and *trutz* by themselves are no longer words at all in the sense in which they occur in these reduplications in literary New High German. But this reduplication is not only conservative, but also aggressively formative, regardless, in a measure, of the individual parts of the reduplication. In Mhg. *rasten* and *resten* 'rest' coexist; in Nhg. *rasten* alone is left. I doubt not but what we may consult such an expression as *ohn' rast aber ohn' hast* for the explanation of the final outcome. And now, after this has been accomplished, it is to be noted that Germ. *hasten* and *rasten* are, to my feeling at least, vastly more congeneric, more correlative, than Engl. *rest* and *haste*. The question as to how much plasticity may have been imparted to the lexical value of words by the cloud of formally assonant words, with meanings not too far removed, that hover about them, would form one of the most fruitful and profound investigations in linguistic history. In such a triad as *langen*, *hangen*, *bangen*, the verb *hangen* has unquestionably been enriched semantically by the mere accident of its possible alliterative pendants. Now, a great deal of congeneric assimilation is in reality this alliterative reduplication incompleted, elliptic. The alliterative companion is potential rather than actual. It flits through the mind, and may or may not leave a trace.

Blessed be that comparatively recent change in grammatical sentiment which permits the secure feeling that the modern

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on the other hand, is imperfective, being used without the dative in the sense of 'hold, support.' Typical examples are *bhāra gr̥naté vdsūni* 'convey goods to the singer' (RV. ix 69. 10); and *vdsu bībharṣi hdstayoh* 'thou holdest wealth in thy hands' (RV. i 55. 8). The distinction is observed without fail, and illustrates most truly the glottogonic value of the reduplication, as a formation which expresses tarrying action or condition.

linguistic processes were in vogue in older periods of speech. I shall now proceed to show a few instances in which alliterative juxtaposition has proved creative in Vedic and Sanskrit. Vedic *ūrjasvant* means 'rich in food, exuberant, strong,' and is analyzable on the surface into a stem *ūrjas* and the possessive suffix *vant*. But there is no independent stem *ūrjas* to be found anywhere in the language: the simple word without suffix *vant* is *ūrj* or *ūrjā* 'food, strength.' If we look at the connections in which *ūrjasvant* occurs, we find, in the first place, that it keeps company very persistently with the word *páyasvant* 'rich in fluid,' obviously a congener with an opposite flavor. Thus e. g. Vāj. S. i 27 *ūrjasvatī cā 'si páyasvatī ca* 'thou art rich in food, and rich in drink'; AV. ii 29. 5 *ūrjam asmā ūrjasvatī dhattam páyo asmāi payasvatī dhattam* '(O heaven and earth,) ye that are rich in food bestow food upon him, ye that are rich in drink bestow drink upon him.' In this passage the simple word *ūrj*, but the derivative *ūrjasvant*. In Vāit. Sū. iii 20 *prajāpater bhāgo 'sy ūrjasvān payasvān* 'thou art of Prajāpati the share, rich in food and rich in drink.' Cf. also AV. iii 12. 2; vii 60. 2; ix 3. 16; xix 46. 6; Māitr. S. iv. 13. 9 (p. 212, l. 3); Tāit. Br. iii 7. 6. 6; 9. 19. 1, 2; Çat. Br. i 2. 5. 11; 9. 1. 7; Vāit. Sū. xvii 8. In RV. x 169. 1 we find *ūrjasvant* in alliterative juxtaposition, or at least in conscious parallelism, with another congener, *pīvasvant* 'rich in fat': *ūrjasvatīr ośadhīr ā riçantām, pīvasvatīr jīvādhanyāḥ pibantu* 'they shall eat herbs rich in nourishment, drink waters rich in fat, life-bestowing.' In addition the language commands at least three other close congeners, *médasvant* 'rich in fat,' *práyasvant* 'rich in enjoyment,' and *ójasvant* 'rich in strength,' all *s*-stems with suffix *vant*: the formation *ūrjasvant* is thus, as it were, a historical necessity, while at the same time the primary word *ūrj* lives on in terms of complete intimacy with the primary *páyas*, e. g. in the expression, Tāit. Br. iii 7. 4. 15, *ūrjam páyaḥ pīvamānā gṛhītām ca* 'yielding food, drink and ghee,' where the occasion does not demand the excitement of alliterative duplication.

Of particular interest in connection with the last sketch are certain momentary or opportunistic formations. Anent *ūrjasvant* we can imagine the objection: Does the frequent juxtaposition of *ūrjasvant* with *páyasvant* after all prove that the former was made in obedience to the latter? may not the stem *\*ūrjas* have had an independent existence, and have perished, after begetting its derivative? Is not its occurrence in this connection otiose, for

the very reason that its meaning would naturally establish it in that very connection? We can fortunately point to a number of cases in which the transformation in deference to an alliterative sense occurs a single time in an unequivocal environment, is not, however, taken up by the speakers and writers, and perishes with the single occasion. In AV. ii 10. 1 we read *kṣettriyaṭ tvā nīrṛtyā . . . muñcāmi* 'from inherited disease, and destruction do I release thee.' The passage recurs in Tāit. Br. ii 5. 6. 1 in the form *kṣettriyaṭ tvā nīrṛtyāi tvā . . . muñcāmi*. Here *nīrṛtyāi* is the ablative feminine in *āi*, common in the Brāhmaṇas for the more normal Vedic ending *ās* (Whitney, Sk. Gr.<sup>2</sup>, §365 *d*), and requires no comment. But *kṣettriya* is a masculine *a*-stem; there is no feminine, and if there were it would be nom. *kṣettriya*, abl. *kṣettriyaṃ* or *kṣettriyaṃ*.<sup>1</sup> Obviously the word is the product of the moment, of the situation, under alliterative impetus. The form is not called for again: it does not succeed in effecting a passage from merely rhetorical to grammatical existence.

A peculiarly interesting case of a momentary formation occurs in the seventh Aṅga of the Jainist Siddhānta; see Weber, Verzeichniss der Sanskrit- und Prākṛit-Handschriften, vol. II, part 2, p. 485. The ordinary word *kāya* 'body' occurs there in the stem-form *kāyas*, in the expression, Prākṛit *maṇasā vayasā kāyasā* = Sk. *manasā vacasā kāyasā* 'with mind, speech and body': *kāya* has been changed to *kāyas* that it may rhyme with the preceding two *s*-stems,<sup>2</sup> although it is itself a secondary derivative from *ka* = *prajāpati* 'the lord of creatures,' i. e. 'coming from the lord of creatures,' and an *s*-stem from such a derivative is a monstrous thing. The true form of the instrumental occurs in a very similar formula, Bhagavad-Gīta, v 11 *kāyena manasā buddhyā* 'with body, mind and intelligence.' Cf. also Childers, Pāli Lexicon, s. v. *kāyo*.

Another formation of this kind is the ἀπ. λεγ. *ṛhānt* 'small,' RV. x 28. 9: *bṛhāntaṃ cid ṛhatē randhayāni* 'I shall subject even the great to the small.' The material from which this *ṛhānt*, peculiar in form and unquestionable in meaning, has been constructed is not so obvious. I can imagine it as derived from the root in *raghū* 'light,' but perhaps *ārbha* 'small,' *arbhakā* 'quite

<sup>1</sup> The scholiast does not hesitate to abstract from *kṣettriya* the necessary base, nom. *kṣetri*; to wit, *bālopadravakāriṇi kacid rakṣojātīḥ kṣetri*.

<sup>2</sup> The case is precisely identical with the formulaic *uśāso doṣāsaḥ ca*, AV. xvi 4. 6, where the stem *doṣā*, prompted by its neighbor *uśās* 'dawn,' yields for the nonce a stem *doṣās* 'eve,' which latter never appears again.



small,' were in the mind of the poet. The fading out of either *gh* or *bh* to *h* occasions no difficulty (cf. *grabh* : *grah*, *videha* and *videgha*, Çat. Br. i 4. 1. 10, etc.), and, at any rate, whatever radical prototype is at work, there can be no question that *brhánt* helped in the formation of *ṛhánt*.

It is of particular interest to observe that at times the assimilative effect of alliteration or rhyme extends to a case-ending, and that this alliteratively changed case-form may, if the speakers fancy it, be propagated so as to become more or less freely available, to the confusion of the ordinary paradigmatic types. Thus the ablatives of the Vedic stems *didyút* and *vidyút* 'lightning' appear in certain Vedic formulas in the curious forms *didyót* and *vidyót*. The origin of these forms may be understood, if we observe the environment which gave rise to them. In Vāj. S. xx 2 we have *mṛtyóḥ pāhi vidyót pāhi*, in Tāit. S. i 8. 14. 1 *mṛtyór mā pāhi didyón mā pāhi*.<sup>1</sup> Considered from a serious grammatical point of view, *vidyót* and *didyót* are the products of proportional analogy, nom. *mṛtyúḥ* : abl. *mṛtyóḥ* = noms. *vidyút*, *didyút* : *x*, where *x* yields *vidyót*, *didyót*, instead of the ordinary ablatives *vidyútaḥ* and *didyútaḥ*. In this case the forms never step out from rhetoric into grammar; they are restricted to these formulas. But in a paper on 'Two Problems in Sanskrit Grammar,' Proc. Am. Or. Soc. for December, 1894, I have treated the old problem of the instrumentals in *nā* from stems in *man* (*mahinā*, *variṇā*, *prathinā*, *bhūnā*), and have, I believe, shown that they are all likely to have arisen either through formulaic juxtaposition or, what amounts to essentially the same thing, the mental suggestion of one another as each was pronounced. The word *mahinā* means 'with greatness' and is itself a blend of *mahnā* and *mahimnā* 'with greatness,' suggested by metrical conveniences. If we observe the meaning of the other three words we find that *variṇā* means 'with extent,' *prathinā* 'with breadth,' and *bhūnā*, again, 'with greatness.' These are so obviously congeneric with *mahinā* as to suggest at once that they were patterned after it. This is shown strikingly by Tāit. S. iv 7. 2. 1 = Māitr. S. ii 11. 2, where three of these four nouns succeed each other in a liturgical formula, and that, too, not in their instrumental form, but in the nominative singular, eliminating thus the suspicion that the peculiar form of the instru-

<sup>1</sup> Cf. Māitr. S. ii 6. 10 and Kāṭh. S., in v. Schroeder's note, for additional variants.

mental is the cause rather than the effect of their appearance in company. The passage reads, *mahimā ca me varimā ca me brathimā ca me . . . yajñena kalpantām* 'may greatness, and scope, and breadth . . . form themselves for me with the sacrifice.'

We may now note a case of peculiar interest. It shows that one and the same word may, under proper circumstances, be subjected to congeneric influence more than a single time. In the *Suparṇakhyāna* 17. 3 (Ind. Stud. XIV 15) occurs the expression *ubhayaṁ sthāṣṇu jaṅgamam* 'both that which stands and walks.' The form *sthāṣṇu* with cerebral *ṣ* after *ā* is bizarre, and we may at once compare the obviously identical phrases, *idaṁ sthāṇu jaṅgamam* 'that which stands and walks,' Mahābh. xiv 1487; *Mārkaṇḍeya Purāṇa* 48. 38; and *lokān sthāṇujaṅgamān*, Mahābh. i 1524, 6622; ii 469; *Harivaṅṣa* 944. The sibilant of *sthāṣṇu* has been imported into the word from its congener *sthāṣnu* 'standing,' e. g. *sthāṣnu carisṇu ca* 'that which stands and walks,' *Manu* i 56; *Bhāgavata Purāṇa* 2. 6. But *sthāṣnu* itself is rather late, occurring neither in the *Rig-Veda*, nor in the *Atharvan*, though *sthāṇú* occurs in each, and we are led to suppose that *sthāṣnu* is an earlier product of *sthāṇú*, patterned after its opposite *carisṇu*. The only difference between *sthāṣnu* and *sthāṣṇu* is that the former defers more precisely to well-known phonetic tendencies, avoiding the cerebral sounds after *ā*. Finally, the Vedic *sthāṇú* is itself open to considerable suspicion: its difficult *ṇ* has been discussed frequently (see e. g. Windisch, *KZ.* XXVII 168; Bartholomae, *Idg. Forsch.* III 172), but no etymological or historical value should be attached to the cerebral quality of its nasal, because Vedic *carisṇú* is its opposite congener. If the word had been *\*sthāṇú* (with dental *n*), it would probably have soon accepted the invitation of *carisṇú* to change its dental *n* to cerebral *ṇ*. Thus *sthāṇú*, *sthāṣnu*, *sthāṣṇu*, all three, are in the last analysis indebted for some of their qualities to the opposite *carisṇú*, even if our presentation of the order of the processes should stand in need of modification.

My article on 'Adaptation' has been reviewed a number of times, and has been received favorably. Two of the critics, Professor Fick in the *Zeitschrift für deutsches Alterthum*, *Anzeiger*, XVIII, p. 184, and Professor Meringer in the *Anzeiger für indogermanische Sprach- und Alterthumskunde*, vol. II, p. 14, both of whom are well satisfied with the general outcome of my investigation, object strenuously to the opening example of

congeneric assimilation. The explanation of the Attic nominative *πούς* for *\*πώς* as an imitation of *ὀδοός* is regarded by both as untenable. Both make in substance the same objection, which may be stated in Prof. Fick's words: "The designations of hand and foot, eye and ear, arm and leg may operate upon one another, because they are often connected in speech and thought; foot and tooth, on the other hand, are in no especial relation: they are in truth not congeneric." I have no especial interest in saving this single explanation, and should be quite willing to throw it overboard, if the argumentation of these scholars was in any way coercive, and did not, as it seems to me, shear the principle of the greater part of its usefulness. I admit freely that hand and foot are more saliently congeneric than tooth and foot; the former, in fact, are opposites, and opposites are the most congeneric of congeners, 'les extrêmes se touchent.' Hence the analogy of opposites has been for years a fruitful source of good linguistic analysis; during all that time congeneric influence has been suspected but rarely for the very reason that it is not so obvious. Precisely in the same way black and white are more vigorously congeneric than black and green, and we may expect hence assimilations of the former two such as I seem to have proved for Germ. *\*hveita-s*, for *\*hveipa-s*, or perhaps rather *\*hveidā-s* (Verner's law) = *ǵvetā-s*, and *\*svarta-s* ('Adaptation,' p. 16, note 2). Yet color-words in general do assume again and again a common suffix (see ib., pp. 16, 25, and below, p. 433). Meringer, in the very same breath in which he argues against my *rapprochement*, makes the interesting suggestion that the German *\*haubid-* for *\*habid-* (cf. Lat. *caput-*) owes its troublesome *u* to *augō* and *ausō*, an influence by far less obvious than that which he regards as sufficient for such assimilations. I would draw attention to the fact that Ved. *angūṣṭha* 'thumb, great toe' = Avest. *aṇgušta*, Ved. *ōṣṭha* 'lip,' *upāṣṭha* 'lap,' and Sk. *koṣṭha* 'abdomen' (cf. Arm. *kuṣt* 'venter') exhibit a case of adaptation of a suffix *-stha* in four designations of parts of the body removed from one another as far as possible. So also, though in a lesser degree, *āsthi* 'bone,' *sákthi* 'thigh' and *aṣṭhi-vántāu* 'the knees,' if they have influenced one another at all,<sup>1</sup> owe their assimilation to the remote idea that these three parts of the body are bony.

<sup>1</sup> Cf. Bartholomae, Studien zur indogermanischen Sprachgeschichte, II, p. 103, note 1.

Professor H. Zimmer has been good enough to communicate to me a striking case of adaptation of an ending to designations of parts of the body, which seems to me to speak for itself, and exhibits the unity of this category in the minds of the speakers, all logical interpellations notwithstanding. I present his list and his explanation in his own words:

1) Middle-Cymric *eskeuarn*, Neo-Cymric *yscyfarn*, Cornish *scovarn*, *scovorn*, *scofor* 'ear,' Arem. Bret. *skouarn*, *skoarn* 'oreille.'

2) Middle-Cymr. *ascwrn*, Neo-Cymr. *asgwrn* 'bone,' Corn. *ascorn* 'a bone,' Arem. Bret. *askourn* 'os.'

3) Middle-Cymr. *loscurn*, Neo-Cymr. *llogswrn* 'tail.'

4) Middle-Breton *arzorn*, Neo-Bret. *arzourn* 'l'endroit où la main se joint au bras,' 'wrist.'

A comparison of Cymr. *llost*, Corn. *lost*, Bret. *lost* = Erse *loss* 'tail' with No. 3 (Middle-Cymr. *loscurn*, Neo-Cymr. *llogswrn*) shows that the suffix *orn*, *ourn* has been added secondarily. No. 2 also may be compared with Sk. *ásthi*, *asthán*, Gr. *ὀστέον*.

A Pan-Celtic word is Erse *dorn*, Gaelic *dorn*, Manx *doarn*, Cymr. *dwrn*, Corn. *dorn*, Arem. Bret. *dourn* 'fist, hand' = Gr. *θέναρ*, Ohg. *tenar*?

This seems to be the starting-point of the ending *orn*, *urn* in the Britannic dialects: Arem. Bret. *arzourn* is equal to *ar-dourn* 'at the hand, at the fist, wrist.' Cf. Zeuss-Ebel, *Grammatica Celtica*, 827.

According to this view the final sounds *-orn* of *dorn*, the word for fist, hand, have by gradual extension captured the designations for joint of the hand, ear, bone and tail, and the logical distance from hand to ear is no less than from foot to tooth. There is enough to show that the vague and the half relevant associations are as much at play in this kind of operation as the sober and matter-of-fact. The group of five Greek words ending in *γῆ* ('Adaptation,' p. 27), united by the common quality of 'hollowness': *σῦριγῆ* 'pipe,' *σάλπιγῆ* 'trumpet,' *φάρυγῆ* 'windpipe,' *λάρυγῆ* 'throat,' *σπηλιγῆ* 'cave,' to which I would now add *σῆραγῆ* 'hollow, cleft,' are certainly due to association of the vague kind. The process borders, in fact, upon popular etymology on the one hand, and symbolic association on the other, and a good deal of latitude must be allowed. For instance, the origin of the 'suffix' *-ṅa* in Sk. *śṛṅga* 'horn'—even the Avestan has *srva* in *srvō-jan* 'breaking off the horns (of cattle)'—from *āṅga* 'limb' must be

regarded in that light<sup>1</sup>: the horn is easily looked upon as a limb—saliently and yet vaguely.

Instead of this doctrinaire restriction as to the lengths to which language might reasonably be permitted to go in this matter, I would point out that the entire semantic community is engaged in these operations, all the way from words having exactly, or nearly exactly, the same meanings to the words or expressions on the very confines of the class. For the sake of convenient survey we may treat such materials in four classes:

I. Words of absolute or nearly absolute identity of meaning.

II. Words belonging to the same general class which, in addition, share some specific semasiological traits that constitute them into a class within a class.

III. Words of opposite meaning.

IV. Congeners in the widest sense.

In the following pages these empirical subdivisions are illustrated by materials which to a considerable extent are new. Especially in the first division the attempt is made to assemble a rather extensive list of pairs of words, in order to exhibit the scope of these operations. A good deal depends here upon the habit of expectancy, and it will be well at this time to offer as much as possible for consideration.

### *I. Words of absolute or nearly absolute identity of meaning.*

Two I. E. words for 'dung, excrement' are contained in Gr. σκῶρ, σκατός and Sk. *ṣákṛt*, *ṣaknás*. Gr. κόπρος corresponds to the last pair as does ὕδρος to ὕδωρ, ὕδατος, and thus forbids the complete identification of *ṣákṛt* with σκῶρ. But the congeneric character of the two words has doubtless had a hand in assigning both to the *r-n*-declension. It is possible that this similarity is due merely to their general relation to the body (cf. 'Adaptation,' p. 5), but it is more likely that the two groups have influenced one another because they are names for the same thing. Cf. Pedersen, KZ. XXXII 245, 246.

Lith. *saldūs*, Obg. *sladükü*<sup>2</sup> 'sweet' are derivatives from the I. E. stem *sāld* 'salt' (J. Schmidt, Indogermanische Neutra, p.

<sup>1</sup> Different views are given by Fröhde, Bezz. Beitr. X, p. 300; Fick, Vergleichendes Wörterbuch, I<sup>4</sup>, p. 212; Kluge, Festgruss an Otto von Böhtlingk, p. 60; Meringer, Beiträge zur Geschichte der indogermanischen Declination (Sitzungsberichte der kaiserlichen Akademie in Wien, vol. CXXV), p. 16 (reprint).

<sup>2</sup> Cf. its opposite *bridükü* 'bitter.'

182), but they owe, I believe, the particular conformation of their suffix, and the specialization of their meaning, to I. E. *svādūs* 'sweet.'

It is not possible to maintain the time-honored equation Gr. *ἀνρμήν* = Sk. *ātmán* 'breath, soul.' The former must be derived from the twice-reduced theme *āFη* 'breathe.' The latter may be *ṛtmán* from the dissyllabic root *anə* 'breathe,' or it may be radically related to Germanic *\*ēpma* in Ohg. *ātum*, Old Saxon *āthom* (cf. Old Frisian *ēthma*). At any rate, *ἀνρμήν* and *ātmán* must no longer be identified; only the common suffix is due to their congeneric character: one was patterned after the other.

The stem *ātmán* has entered into affiliation with another word in a very interesting manner. By its side occurs the reduced, or rather mutilated, stem *tmán*, phonetically unaccountable. The reduced stem, it may be noted, is semantically defective when compared with the full stem. The primary meaning of *ātmán*, 'soul, life's breath,' scarcely appears with the reduced stem at all; the latter flourishes (especially in the instrumental form *tmánā*) in the more faded meaning of 'self,'<sup>1</sup> which is also common with the strong stem *ātmán*. Now, there is another word, *tanū* 'body,' which is again employed, especially in the instrumental, in the sense of 'self.' The following two passages shall of themselves convey to the reader the explanation I have in mind: RV. vi 49. 13 *d, rāyā madema tanvā tánā ca* 'may we in wealth rejoice, ourselves and our children'; RV. x 148. 1 *suvilām . . . tmánā tánā sanuyāma tvótāḥ* 'may we, ourselves and children, obtain prosperity, aided by thee.' Obviously *tanvā* and *tmánā* are interchangeable terms in this connection, and I doubt not that the type *tmán* has arisen from *ātmán* by giving up its *ā* in deference to its close congener *tanū*.<sup>2</sup> Cf. further the expression *tmāne tókāya* 'for ourselves and children' (RV. i 114. 6) with *tokāya . . . tanūnām* 'of ourselves and children' (RV. ix 778. 18); *tānayāya tmāne ca* 'for our posterity and ourselves' (RV. i 183. 3) with *tanvā tāne ca*, with the same meaning (RV. vi 46. 12).

<sup>1</sup> See e. g. Māitr. S. iii 9. 7 (p. 126, l. 10).

<sup>2</sup> Possibly aid and comfort may have come to this movement from the large number of words with the opposite meaning 'children, offspring, posterity' beginning with *t*; namely, *túc, tuj, tokd, tán, tánas* and *tānaya*. These as a group are constantly found in juxtaposition with the stems *tanū* and *tmán* in the opposite sense of 'self'; cf. Grassmann's lexicon under each word. A typical example is RV. i 114. 6 *tmāne tokāya tānayāya mṛḍa* 'pity ourselves, our children and our posterity.'

Ved. *átithi* 'guest' is compared with Avest. *asti* 'minister,' and somehow both suggest Goth. *gast(i)-s*, Obg. *gosti* and Lat. *hosti-s*. The two groups may be of congeneric structure, since *gast-s*, etc., may be referred to an I. E. base *\*ǵhot-thi* parallel with *\*ot-thi*. The comparison of the two groups is, however, uncertain; Brugmann, *Indogermanische Forschungen*, I 172 ff., makes out a fair case for O. Müller's (*Festus*, p. 102) comparison of *hos-ti-s* with *ǵ-ενFo-s*, which would necessitate a root *ǵhes* 'devour' (Vedic *ghas*). In that case the similarity of *átithi* and *gasts* is fatuous.

The *ν* of the oblique cases of *εἷς* (Cret. *ἔν-s*), *ἕν* 'unus, unum,' from the I. E. stem *sem* 'one,' are supposed to be due to paradigmatic analogy: *ἔν* unquestionably may have propagated its *ν* through the oblique cases, just as *Ζῆν* for *δι̌ēm* yields *Ζηνός*.<sup>1</sup> Nevertheless, it is of interest to observe the other words for 'one' in the language: *οἶνο-* [European stem *oino-* in Lat. *oino-s*, Lith. *v-ėnas*, Goth. *ain(a)-s*] and *\*μόνFos* (*μοῦνος*, *μόνος*). The domain of the number 'one' is thus largely held by words with *n*-suffixes, and the possibility must be admitted that they caused the change of *\*έμός* to *ένός*, or aided in bringing it about.

The I. E. words for 'tear' are based upon two congeneric roots with frequently identical suffix-formation; the speakers rarely forgot the existence of the double opportunity, and the propriety of keeping the two groups in touch with one another. We may assume that the radical elements are *aĕ* 'to be sharp' and *daĕ* 'bite.' Sk. *aç-rá-m* (I. E. stem *\*aĕ-ró-m*) is thus to be compared with Goth. *tagr* (I. E. stem *daĕ-ró-m*). Vedic *áç-ru*, again, is to be compared with *δάκ-ρυ* (*δάκρυμα*, Lat. *dacruma*). If De Saussure, *Mémoires de la Société de Linguistique*, VII 88 ff., is correct in assuming the lexical identity of Homeric *δάκρυός* and *δακρυόεις*,<sup>2</sup> then the Greek by itself has the two types I. E. *\*aĕ-ru* and *daĕ-ru*. The change of *\*άκρυ* to *\*όκρυ* is supported by the doublet *ἄκρις*, *όκρις* (cf. Vedic *áç-ri-s* 'edge'), and lends strength to the derivation of the words for 'tear' without *d* from the root *aĕ* 'to be sharp.'

Very similarly the I. E. word for 'day' seems to have pre-empted a duplex radical territory, but under formative conditions which show that the meaning of the word acted as a bond of

<sup>1</sup> Professor von Bradke, *Beiträge zur Kenntniss der vorhistorischen Entwicklung unseres Sprachstammes*, p. 30, note, argues in favor of a pre-Hellenic stem with *n*, comparing *Diāna* with *Διώνη* and *Jānus* with stem *Ζην-*.

<sup>2</sup> Cf. *δακρυόεις πόλεμος*, II, v 737, with *δάκρυός πόλεμος*, II, ix 64.

union between the formations. Vedic *áhas* 'day' (I. E. stem *\*oǵhes*) is closely parallel to the stem *\*dhoghes*<sup>1</sup> in Goth. *Dagis-theus*. J. Schmidt, *Indogermanische Neutra*, p. 151, assumes that the *o*-stem *\*dhogho* in Goth. *dag(a)-s* arose from the nominative of the *s*-stem *\*dhoges* in *dags*, which coincided formally with the *o*-stems. At any rate, the *s*-stem is secure, and a total separation of the history of the two words is not likely to take place. Cf. Meringer, *Beiträge zur Geschichte der indogermanischen Declination* (Proc. of the Vienna Academy, vol. CXXV), p. 36 of the reprint; Pedersen, *KZ.* XXXII 250.

Avest. *aznām* = Ved. *áhnām* 'of days'; Avest. *asni* = Ved. *áhni* 'by day,' together with Vedic *áhar*, point to a heteroclitic Aryan declension *ázhār*, *ázhnas*. The Avestan has by its side another heteroclitic *r-n*-stem for 'day,' *ayar-*, *ayan-* (nom. *ayarə*; gen. loc. sg., acc. pl. *ayān*). In a measure the similarity of these words may be due to their character as words designating 'season'; these I have shown ('Adaptation,' p. 19 ff.) evince a marked preference for this type of declension. Yet it seems unlikely that the common, narrower meaning 'day' did not have a hand in the final adjustment of the sound-matter that entered into the words. Cf. J. Schmidt, l. c., 216, note; Fick, *Wörterbuch*, I<sup>4</sup>, pp. 158, 163, 168.

Avestan *kamərədu* 'head' (of Ahrimanic beings) may be a blend of two Aryan words, one represented by Ved. *mūrdhān* 'head, peak,' the other by Ved. *kakūbh*, *kakūd* 'peak,' *kakātīkā* 'part of the occiput'; cf. Lat. *caput* and *cacūmen*. Thus I had written in the original version of this article, read before the American Philological Association in 1893 (cf. *Transactions*, vol. XXIV, p. xxviii, middle). Bartholomae, *Indog. Forsch.* V 224, has since made the same suggestion. Possibly the element *ka* had risen even in I. E. times to the value of an 'initial determinative' in this sense, and it is possible, again, that it had been contaminated further, very early, say by the word for 'ear,' *aus* to *kau*; cf. Goth. *haubīp* 'caput' and Lith. *káukolė* 'skull.'

Very similarly *κελευθος* with the rare duplex ablaut-form *ἀ-κόλουθος* may be explained satisfactorily as a blend of a derivative from *ἐλευθ* (*ἐλήλουθα*) and the root (probably in Ionic form) I. E. *qel*, otherwise present in *τελλω* (cf. *τελέθω*) and *περι-πλ-όμενος*.

<sup>1</sup> Note, however, the difference in the guttural aspirates. Avestan *aznām* points to the I. E. palatal *ǵh*; the connection of Goth. *dags* with the root *dheǵh* (Ved. *dagdhá*, Lith. *degù*) to the I. E. velar *ǵh*. Such interchanges are common; see J. Schmidt, *KZ.* XXV 125 ff.



Pischel, *Vedische Studien*, II 63 ff., has proved conclusively the existence of a Vedic word *pravát* in the sense of 'river' (cf. previously Weber, *Ind. Stud.* IV 407), from root *pru* 'flow.' He has gone too far in denying the existence of another *pra-vát* in the sense of 'slope.' The formation *pravát* 'river,' feminine, is distinctly peculiar; whatever may be its precise history, its close congener *sravát* 'river,' from root *sru* 'flow,' must have shared in its fate.

The dissyllabic root Sk. *caru*, *carv* 'chew' (see the author in the forthcoming *Proc. Am. Or. Soc.* for December, 1894; *Journ.*, vol. XVI) is flanked by the root *bharv* 'chew' in Sk. *bharvati*; Avestan *aš-bo\*rv-a* 'eating much.' If *caru*, *carv* is proethnic (cf. Fick, I<sup>4</sup>, p. 385), then *bharv* is likely to have been the borrower of some of the common characters of the two. For a similar vein of adaptation in connection with *u* of dissyllabic roots, cf. the verbs *jūrvasi* 'consume (the enemy),' *tūrvasi* 'overcome (the enemy),' *dhūrvasi* 'injure (the enemy),' in the *Proceedings*, ib., note.

Hübschmann, *Armenische Studien*, p. 77, compares Arm. *surb* with Ved. *ṣubhrá*, assuming metathesis. Another word, Germanic *\*sūbrāz*, Ohg. *sūbar*, Mhg. *sūber* 'sauber' tempts us. Even the modern expressions 'sauberes Mädchen,' 'saubere Person' are peculiarly near to Vedic *ṣubhrás* . . . *yávā* RV. ix 14. 5, which might be translated by 'sauberer Junge,' and *tanvāḥ ṣumbhamānāḥ* 'bright bodies' RV. i 165. 5. It is possible to identify all three, *ṣubhrá*, *surb* and *sūbar* by assuming that the original proethnic form of the root was *seṽbh* 'to be pure,' which, in certain domains of I. E. territory, came under the influence of the congeneric *keudh* 'to be pure.' The Sanskrit, taken by itself, manifests a strong sympathy between *s* and *ṣ*,<sup>1</sup> and the change of *subh* to *ṣubh* in deference to *ṣudh* is without objection. There are, in fact, distinct indications of formal contact between the two roots: both are represented by nasal formations which are not very common, *ṣundhati* and *ṣumbhati*, *ṣundhana* and *ṣumbhana*. The presence of another congeneric root *ṣuc* 'to shine' may have also contributed to the influence of *ṣudh* upon *subh*, and *ṣuc* in its turn raises another question. The correspondence between itself and *ruc* is entitled to consideration from the point of view of initial 'determinatives,' precisely as much as *ṣuc*, *ṣudh* and *ṣubh*

<sup>1</sup> Cf. Bloomfield and Spieker, *Proc. Am. Or. Soc.* for May, 1886, *Journal*, vol. XIII, p. cxviii ff.

from the point of final 'determinatives.' Without strain one can imagine that *ꣳuc* is a precipitate from the roots for 'to shine,' beginning with *ꣳu* and the old I. E. root *reukē* (λεῦκος, *loucmen*).<sup>1</sup> Barring the last-mentioned root, the etymologies of the entire group are wanting: Fick, I<sup>4</sup>, p. 428, derives Sk. *ꣳudh* from an I. E. *kuendh*, comparing Gr. καθάρως, but the latter claims Sk. *ꣳithirā* 'loose' with better right. We can take it for granted that the group did not come about without congeneric influence, though there is nothing coercive about any of these suggestions in detail.

The Vedic root *ꣳam* 'to exert oneself' is absolutely synonymous with *ꣳram*. In RV. viii 56. 6 we have *ꣳrāntāya sunvāte* 'to him that exerts himself and presses (the soma)'; in RV. i 141. 10; iv 31. 8, etc., we have *ꣳaꣳamanāya sunvāte*, in the same sense. This recalls couplets like Lat. *frango* : Sk. *bhanājmi* 'break'; Lat. *fungor*, Sk. *bhūñktē* : Goth. *brūkjan* 'brauche' (see below). In the later Sanskrit a third root *klam*, identical with *ꣳram* in meaning and inflection, appears; this would seem to be a Prākritic form of *ꣳram*, unless, indeed, it is a mixed product of *kliꣳ* 'distress' and *ꣳram*, in the manner of *bhyas* from *bhī* and *tras* (cf. Idg. Forsch. IV 71; ZDMG. XLVIII 573, note). This, again, throws light upon the origin of the 'root-determinatives,' and so do the three Vedic roots *gras*, *bhas*, *ghas* 'devour,' the last two with the notable derivative adjectives *kṣu* and *-psu* 'food.'

A 'suffix' *-ūṣa* figures in the single Vedic noun *pīyūṣa* 'biestings, sap' (Whitney, Sk. Gr.<sup>2</sup> 1197 c). The suffix may be eliminated from all serious morphological considerations without any great flight of fancy: the word may be a derivative from root *pī* 'swell,' patterned after *yūṣa* 'broth.' Similarly *ꣳuꣳulūka*, in *ꣳuꣳulūka-yātu* (RV. vii 104. 22) 'name of a demon,' lit. 'he that practices sorcery with the *ꣳuꣳulūka*-bird,' fem. *ꣳuꣳulūkā* (Maitr. S. iii 14. 17), is likely to have been constructed under the influence of *ūlūka* 'owl.'

<sup>1</sup> Triads of roots, one of which stands, as it were, in the middle, are likely to have arisen at all periods of speech in the manner of Ved. *bhyas* 'fear,' from *bhī* and *tras* (cf. Idg. Forsch. IV 71; ZDMG. XLVIII 573). Thus:

Ved. *bhī* : *bhyas* : *tras* 'fear.'  
 I. E. *ueđ* : *ueq* : *seq* 'speak.'  
 I. E. *drem* : *drey* : *dhey* 'run.'  
 Ved. { *ꣳudh* : *ꣳuc* : *ꣳuc* 'shine.'  
       { *ꣳubh*

The following instances invite judgment on the same lines: Avest. *parətu* and Sk. *setu* 'bridge' with the none too common suffix *tu* may have been patterned one after the other; likewise Avest. *doi̯pra* and Sk. *netra* 'eye.'<sup>1</sup> The cerebral in Ved. *kāṭā* 'pit,' doubtless a popular form of *kartā* (*gārta*) 'pit,' may account for the cerebral in *kēvaṭa* 'pit' (cf. Fick, I<sup>4</sup>, p. 375). And, again, *kēvaṭa* and *avaṭā* have surely been in the same mold. Ved. *kubjā* 'hunchbacked' has a hand in the formation of Sk. *nyubja* 'crooked-backed.' The Dhātupāṭha reports a root *kṣvid* 'sweat,' which looks as though it had been modelled after *svid* 'sweat.'<sup>2</sup> The initial *kṣ* may have been derived from root *kṣar* 'flow.'

There are indeed an enormous number of I. E. words of absolutely identical meaning which differ from one another, either by an additional sound, possessed by one, absent in the other, or by a sound so different in one, as compared with the other, that phonetic adjustment has hitherto failed to harmonize them. In the following a collection is attempted which lays claim neither to completeness nor to criticism sufficiently thorough to warrant the belief that all represent congeneric formations. The list is intended to be suggestive rather than conclusive: arrangements of linguistic materials from the semantic point of view are almost entirely wanting, and there is little danger of offering too much in this direction.

Words for parts of the body are so picturesque and full of salience that we may expect to find them figuring prominently in such a list. Thus the words for 'stomach,' 'abdomen,' and the like, seem to have been cut out of different lexical cloth, but with the same suffixal trimming: Gr. *γαστήρ*, Lat. *venter*, Goth. *qīpr-s* in *laus-qīprs* 'with empty stomach,' Ved. *jaṭhāra* 'stomach' (cf. Goth. *kīlpei* 'womb') cannot be referred to the same proethnic word, but nothing forbids the assumption that they were coined from different radical materials with the same suffix. Ved. *jaṭhāra*, again, coquets with *udarā* 'womb,' which, in its turn, supported by Lith. *vėdaras* 'stomach,' Gr. *ὄδρος* 'belly' (Hesych.), *ὄστρος* 'belly,' calls up *ἐντέρον*, *ἐντερα* 'entrails' and Lat. *uterus*.<sup>3</sup>

<sup>1</sup> These cases repeat the formative principle which seems to have furnished with identical suffixes such pairs as Goth. *himins*: *ovpavós* (Kluge) and Old Norse *konungr*: *Fávaξ* (Fick, Anzeiger f. deutsch. Alterth. XVIII 185).

<sup>2</sup> The Dhātupāṭha defines both as employed in *snehanamocanayohi*.

<sup>3</sup> Cf. Bartholomae, Idg. Forsch. III 164, note.

For the words for 'liver' Joh. Schmidt, *Pluralbildungen*, etc., p. 199, suggests *ljēkrt* as the common I. E. predecessor. This is after all nothing but a perplexed composite photograph of the separate I. E. words, some of which begin with *l* (Arm. *leard*, Ohg. *lebara*, Ags. *lifer*, Old Norse *lifr*, Old Pruss. *lagno*) and some with *ī* (Sk. *yākr̥t*, Zend *yākarə*, Gr. *ἥπαρ*, Lat. *jecur*, Lith. *jeknos*). Here again it seems probable that two I. E. words, betraying their closely congeneric character in their suffixes, have left their descendants variously in the individual languages; the etyma of both forms are profoundly obscure.<sup>1</sup>

Not less vain, in the opinion of the writer, are the attempts to solder together all the words for 'tongue' in our family of speech. Doubtless it is true that with all their Protean variety they suggest one another, and this suggestiveness has led investigators again and again, and very naturally, to fuse all the materials into a single prototype. Very recently two such attempts have been put on record—one by Johansson, *Idg. Forsch.* II 1, the other by Collitz, 'The Aryan Name of the Tongue,' in the *Studies of the Oriental Club of Philadelphia*. Both discussions are extremely ingenious and valuable, but the start-form which each scholar arrives at is again a composite photograph. Johansson presents *\*zdng̃hū*, *zdng̃huā*; Collitz *d̃ng̃hū*, *d̃ng̃hvā*.<sup>2</sup> Aside from the cacophony of these *soi-disant* words, as to which ears and mouths may differ, it seems unlikely that the materials which have entered into each sum should have passed through the ages so free from the effects of popular etymology as to make their direct employment phonetically a safe procedure. In the Vedic dialect, and probably in Indo-Iranian (Aryan), the word for 'tongue' has without doubt established an alliance with the word for 'spoon,' Ved. *jūhū*<sup>3</sup>; in Latin *lingua* the effect of *lingere* is obvious; in the Germanic languages *tongue* and *tong*, *zunge* and *zange* have not, perhaps, been without influence upon each other. Meringer, l. c., p. 38, arranges the representatives of 'tongue' under three

<sup>1</sup> From the point of view of the German we may note the genuine *rapport* of 'liver' and 'lung.' The derivation of the latter is again obscure.

<sup>2</sup> To this may be added Fick's start-form, *d̃ng̃huā* (*Vergleichendes Wörterbuch*, I<sup>4</sup>, p. 71).

<sup>3</sup> Cf. Pischel, *Vedische Studien*, II 110 ff.; Collitz, l. c., p. 5, note. Lat. *ligula* 'spoon' appears in lexical works as *lingula*, with evident attachment to *lingua* (*lingula* 'little tongue') or *lingere* 'lick.' Cf. Gust. Meyer, *Idg. Forsch.* II 368.

start-forms: \**ṅghū*, \**d-ṅghvā* and \**s-ṅghvā* (or \**s-iṅghvā*), and imagines that the first of these was modified by prefixes. But prefixes, thus broadly launched, are indicators of perplexity: all that is needful is to suppose that there was one creation of a word for 'tongue' with the final complex *-ḡhvā*; popular etymologies and new formations from various radical materials with this 'suffix' *-ḡhvā*, in the manner of Romance *tastare* after *gustare*, may have done the rest. Other parts of the body, represented by doublets that have not as yet been harmonized are Sk. *klóman*: Gr. *πλεύμων*, Lat. *pulmo*<sup>1</sup>; Aryan *žhṛd* (I. E. *ḡhṛd*), in Sk. *hṛd*: I. E. *kṛd*, in Lat. *cord*-, etc.; Obg. *kosti*: Sk. *ásthi* 'bone'; Lat. *liēn* (Cels. 2. 7. 8): Gr. *σπλήν*, Ved. *plīhān* 'spleen'<sup>2</sup>; possibly Hom. *ἀγοστός* 'flat of the hand': Ved. *hāsta*, Avest. *zasta* 'hand'; possibly (with Meringer, l. c., p. 41) a theme Sk. *cakṣ-*: *akṣ-* 'eye'<sup>3</sup>; I. E. *ḡhenu*, in Sk. *hānu*, Avest. *zanva*: I. E. *ḡgenu*, in *γένυ-s*, *genu-īnus*, Goth. *kinnus* 'chin' (cf. Fick, I<sup>4</sup>, p. 53).<sup>4</sup> Meringer, l. c., p. 41, compares also *κωλήν* 'thigh-bone' (cf. Obg. *kolēno* 'knee') with *ὠλένη* 'elbow.'

Other cases of words with identical meanings which betray their congeneric character in formative similarity are: Sk. *kṛtmis*, Lith. *kirmis* (I. E. *qṛtmis*): Lat. *vermis*, Ohg. *wurm* 'worm'<sup>5</sup>; I. E. *ṛsēn* and *uṛsēn* 'male animal' (Idg. Forsch. IV 73); Lat. *aper*: Lat. *caper*, Gr. *κάπρος* (*σὺς* *κάπρος*) 'goat, boar' (Fick, I<sup>4</sup>, pp. 362, 376); *ūs*: *ōs* 'sow' (ibid. 141, 392); *émús* and *émús*: *κλεμμύς* 'tortoise'; I. E. *trozdos*, in Old Norse *pröst* (Primitive Germanic *prastaz*): I. E. *trozdos*, in Lith. *strázdas* 'thrush.' We may note that this list consists of names of animals which are peculiarly liable to affect one another. Cf. also perhaps the following pairs: Vedic *kapi*: Germ. *affe* 'ape,' and Sk. *vamrá*, *vamrī*: Avest. *maoiri* 'ant' (Fick, I<sup>4</sup>, pp. 110, 519); Ved. *karká*, Gr. *καρκίνος*: Obg. *rakū* 'crab.'

Other pairs are: Lith. *szvėndrai*: *nėndrė* (*lėndrė*) 'reed' (cf.

<sup>1</sup> Lat. *p* does not ordinarily = I. E. *g*; hence *glewmōn* is problematic. Gr. *πνεῦμων* after *πνεῦμα* illustrates the mobility of such a word.

<sup>2</sup> Lat. *liēn* has been explained as *splī(h)ēn*, but *spl* is unchanged in *splendeo*; the analogy of *stlocus*, *locus*; *stlis*, *lis* is therefore illusory.

<sup>3</sup> Cf. perhaps similarly Goth. *hausjan* 'hear': *ausō* 'eat.'

<sup>4</sup> This example, of course, should not, for the present, be discussed apart from the cases like *έγώ*: Ved. *ahám*, Avest. *azəm*; cf. v. Fierlinger, KZ. XXVII 478, note; Brugmann, Grundriss, I 349.

<sup>5</sup> Cf. also Gr. *ελμύς* 'worm, tape-worm,' which again seems to be radically independent.

Fick, I<sup>4</sup>, pp. 428, 506)<sup>1</sup>; Lith. *kaszus*, Obg. *koši* (I. E. *qoso-*): Ved. *kóṣa*, *kóṣa* (I. E. *qouso-*) 'basket, box'; Hesychian *φαιδρόν* *φαιδρόν*, Lith. *skaidrūs*: *φαιδρός* = Lith. *gėdras* 'clear' (Fick, Bezz. Beitr. XVIII 143 ff.); Obg. *dobrū*: Ved. *bhadrá* 'good'; Lith. *ilgas*: Ved. *dirghá* 'long'<sup>2</sup>; *bindu* 'drop,' modified by popular etymology to *bhindú* (root *bhid* 'cut'), TS. vi 6. 3, 5, and Apast. Çr. xiii 20. 11: *indū* 'drop'; I. E. stem *ǵhem* in Gr. *χαμαί*, Avest. *zem*, Lith. *žemė*, Obg. *zem-lja*: I. E. *ksem* or *kšem* in Gr. *χαμαλός*, Ved. genitive *kšm-ás* 'earth'; Goth. *haim(a)-s*, Nhg. *heim* 'home,' Lith. *kėmas* 'village'<sup>3</sup>: Ved. *kṣēmas* 'dwelling'; *ἄμμος* (*ἄμμος*) and *ἄμαθος*: *ψάμμος* and *ψάμαθος* 'sand'; I. E. stem *melg* in Goth. *miluks*, etc., 'milk,' flanked by *ἀμέλω* 'to milk': I. E. stem *ǵelg* 'milk,' flanked by Hesychian *βαδελεγεῖ* *ἀμέλω*<sup>4</sup>; I. E. root *seus* 'to be dry,' in Ved. *ṣuṣka*, Avestan *huška* 'dry': I. E. *eus* 'burn,' in Ved. *ósati*, Gr. *εῖω*, Lat. *ūro*, etc.; Gr. *ἐλκω* (*selkō*) 'draw' (cf. Lat. *sulcus* 'furrow'): Lith. *velkù* 'draw'; I. E. root *meld* in Ags. *meltan* 'melt': I. E. root *smeld* in Ohg. *smelzan* 'smelt'; Sk. root *ardh* 'prosper': *vardh* 'grow,' and connected with them I. E. *ǵdhy-* 'high, steep,' in Lat. *arduus*, Ved. *ūrdhvá*, Avest. *ərədva*: I. E. *ǵdhy-* in Gr. *φορβός*, *βορβός* (Fick, Anz., I. c., p. 185); Ved. *vār*: *ἵδωρ* 'water' (ibid.); Lat. *velle*: Gr. *ἐθέλω*: Gr. *δέλλομαι*, *βούλομαι* 'will'<sup>5</sup> (Fick, Anz., I. c.); the rough breathing (*ś*) in *ἵσται* (Ved. *āste*) is due to *ēd* (*sed*) 'sit'; Ohg. *bim* 'am' from I. E. root *bheuz* is modelled after forms of the I. E. root *es*, Goth. *im* 'am' (cf. Brugmann, Grundriss, II 908); Lat. *frango*: Ved. *bhaj* (*bhanājmi*) 'break'; European root *bhreus* in Lat. *fruor* (*\*frugv-or*), *fructus*, Goth. *brūkjan* (Nhg. *brauche*): I. E. root *bheuz* in Lat. *fungor*, Ved. *bhuñkté*; Goth. *skulan*: Ohg. *sulen* (cf. Johansson in Paul and Braune's Beiträge, XIV, p. 295); I. E. root *sǵū*: I. E. root *sū* 'sew' (Gust. Meyer, Albanesische Studien III: Proc. Vienna Acad. CXXV, p. 41 ff.); Ved. *jīvātu*: Avest. *jyātu* 'life' (Fick, I<sup>4</sup> 198, 201); Ohg. *winistar*:

<sup>1</sup> Cf. the broader group, Ved. *vetasá* 'reed,' *atasá* 'jungle,' and, more remotely, *yávasa* 'grass' and *avasá* 'fodder,' Obg. *ovisú* 'oats.'

<sup>2</sup> Cf. also Achem. *drānga*: Lat. *longus*, Goth. *laggs* (Meringer, I. c., p. 35).

<sup>3</sup> Cf. also Ved. *grāma* 'village.'

<sup>4</sup> We may imagine *βαδελεγεῖ* a blend of *δελεγ* and *βλαγ*, *δ* and *β* being the treatment of I. E. *ǵelg* and *ǵlg* respectively, according to the usual habits of velars in Greek.

<sup>5</sup> Brugmann, Grundriss, II 862, explains the length of the augment in *ἡβουλόμην* (as well as in the congeneric words *ἡμελλον* and *ἡδυνάμην*) as imported from *ἡθελον*: *ἐθέλω*.

Lat. *sinister* 'left'; I. E. *alǵo-* in Lat. *alius*, etc. : I. E. *anǵo-* in Ved. *anyá*, etc., 'other'; Ved. *cánas*, Avest. *canō* : Ved. *vánas*, Lat. *Venus* 'attachment, favor'; Gr. *μόςχος* : *σχος* 'shoot'; *μάλευρον* : *ἄλευρον* 'meal'.<sup>1</sup>

Of pronominal, adverbial and prepositional words we may group the following pairs: the Vedic demonstratives *syá*, *syā*, *tyád* : *sá*, *sā*, *tád* (I. E. *só*, *sā*, *tód*); the former pair is likely to be a blend of I. E. *só* and *ǵo*, etc. Greek *ζύν* is more than likely a blend of *σύν* with I. E. *gom* (Lat. *com*): the vowel of *σύν*, *ζύν* is of obscure origin. Cf. further I. E. *poti* : *proti* in Ved. *práti*, Gr. *ποτί* : Avest. *paíti*, Gr. *ποτί*; Lat. *super* : Ved. *upári*, Gr. *ὑπείρ*; Gr. *εὖ* : Ved. *sú* (cf. *vásu*).

II. *Words belonging to the same general class which, in addition, share some specific semasiological traits that constitute them into a class within a class.*

That is, words belonging to the same class frequently call up for congeneric assimilation those members of that class which stand related to them by more special traits. Thus, of parts of the body, those of the head are especially prone to influence one another; hence *augō* and *ausō* 'eye and ear' in Gothic. The Greek pair *λάρυγξ* and *φάρυγξ* not only belong to that broader group which designates 'hollowness' ending in *γξ*, but, more narrowly, their closer lexical intimacy as contiguous parts of the body betrays itself in every sound except the initial. Cf. also Mhg. *ters* 'penis' : *ars*; Ved. *pakṣá* 'wing' : *kakṣa* 'armpit' (cf. Lat. *coxa* 'hip'). For Ved. *ṣṛ̥ṅga* and *d̥ṅga* see above. Greek *ἀηδών* and *χελιτών* (Lat. *hirundo*) are not only birds, but more narrowly, and by distinction, 'birds of song.' Germ. *mūs* and *lūs* 'mouse and louse' are not only united by the common bond of 'designations of animals,' but they are both 'varmint,' 'unge-

<sup>1</sup> A number of couplets whose explanation may be sought, more doubtfully, in the direction indicated can be gleaned from Meringer's tract: Germ. *deichsel* : Ved. *iṣā* (p. 43); Goth. *arbaip* : Lith. *dárbas* 'work'; Ohg. *narva* : Old Norse *qrr*, Ved. *drus* 'wound, scar' (pp. 46, 47); γνόφος : κνέφος : νέφος (p. 40; cf. Pott, KZ. XXVI 137). With the last group cf. also Lith. *debesis*. Does Neo-Hell. γόερνω = 'flay' contain a suggestion of γυμνός 'naked'? Note also English *mash* : *smash*; *squirt* : *spirt*; *whir* (cf. Germ. *schwirren*) : *whiz*; Germ. *rupfen* : *zupfen* (and cf. their opposite *tupfen*, *betupfen*); *schwanken* : *wanken*; *whisper* (Eng. *whisper*) : *pisperm*; Germ. *schreiten* (Ags. *scriðan*) : Eng. *stride*; Eng. *citizen* owes its *z* to *denizen*.

ziefer.' Similarly Germ. *hulan* owes its *h* to *husar*<sup>1</sup>; the two are not only 'kinds of soldiery,' but more narrowly 'cavalry.' Ved. *rajatā*, Lat. *argentum* 'silver' shows an I. E. suffix *to* which is repeated in the words for 'gold,' Goth. *gulþ*, Obg. *zlato*, Sk. *hāṭa-ka* (cf. also Gr. χρυσός for χρυτεός): these two are not only 'metals,' but 'the precious metals.'<sup>2</sup>

### III. Words of opposite meaning.

Opposites exercise the same influence upon one another as identical congeners. Just as Ved. *kubjā* 'hunchbacked' seems to betray in its final sounds its lexical relation to Sk. *ny-ubja* 'crooked-back,' so also *urubjā* 'wide open' is the opposite of *kubjā*. The 'suffix' *ubja* here makes a distinct show of adapting itself to the twin idea of 'curving' and 'straightening out.'<sup>3</sup> To the hosts of well-known examples we may add Ved. *tāyū* 'thief': *pāyū* 'guardian'; ξηρός and ψηρός 'dry': νηρός 'damp'; Vedic *paçcātāt* 'behind' is probably formed secondarily from *paçcā* 'behind' to match *purāstāt* 'in front.' For the relation between *carigñū* on the one hand, and *sthāñū*, *sthāṣnu* and *sthāṣṇu* on the other, see above.

Nhg. 'freund und feind' are combined in alliteration: the correspondence between the two words runs through to Gothic

<sup>1</sup> See Paul, Ueber vocalische Aspiration und reinen Vokaleinsatz, Programm (Hamburg, 1888), p. 40.

<sup>2</sup> The suffix of this category is identical with the widely diffused suffix *-to* in color words; cf. Ved. *hārita*, Avest. *zairita* 'yellow.' These metals are doubtless named after their color. Nevertheless, it remains true that just these two, and not others, are formed in this way, and it is likely that one was formed after the direct pattern of the other.

<sup>3</sup> At times it is difficult to say whether the assimilation takes place from the point of view of identity or oppositeness. 'Sun and moon' are built up in part upon two I. E. rhyming stems *svēn* and *mēn* (see Fick, I<sup>4</sup>, pp. 107, 153), and may thus far be felt as opposites; but in Goth. *sunna*, *mēna* and *stairnō* (the latter from *ster*, itself distinctly suggestive of *sver* in Avest. *hvarə* 'sun') the class identity rather than oppositeness is felt by the speakers. To the proethnic word for 'yesterday,' Ved. *hyds*, Avest. *zyō*, Gr. *χθέρ*, Lat. *hes-ternus*, Goth. *gis-tra*, the Vedic adds as pendants *çvds* 'to-morrow' and *sadyds* 'at the present day': each is an opposite of the other two, and as a class they represent a necessarily faltering and limited attempt at establishing a relative chronology, with the present day as the starting-point. The spirit is willing, but the lexicon is weak, and German *übermorgen*, *vorgestern* are the best that can be produced by way of extending this time-relation; Eng. 'the day after to-morrow,' 'the day before yesterday' show how expensive the attempt may become.



*frijond* and *fjiond*. In Old English and Middle English the words keep pace: O. E. *freond*, *feond*, M. E. *frënd*, *fënd*. But the correspondence runs through the entire history of the two I. E. roots *prī* 'love' and *pī* 'hate' (weak forms): Ved. *pīyati*, Goth. *fijan* 'hate': Obg. *prijati*, Goth. *frijōn* 'care for' (cf. Ved. *priyā* 'fond, beloved'); Lat. *pejus* 'worse': Sk. *prēyas* 'more beloved.' It seems very unlikely that this correspondence is merely alliterative. But here is a suggestion of more than usual seductiveness. The I. E. root *per* means 'to fill' primarily, but in the Vedic dialect a large number of its derivatives mean 'to give, to make presents to': *pr-ṇā-ti* 'he gives,' *pūrtā* 'the stipend of the Brahman,' *pūrti* 'the act of giving.' We may assume that *prī* is derived from this root, but not with the meaningless 'determinative' *ī*, but as a modification of the root *per* (*pr*), in deference to its semantic opposite *pī*.

In Sk. *ruṣṭā* means 'angry,' *tuṣṭā* 'pleased' (cf. *rūṣyati* and *tūṣyati*), respectively from the roots *reus* and *teus*. There is no reason to doubt that the congeneric character of the two words was felt in proethnic times: Lith. *rus-ta-s* 'fierce' and Obg. *po-tuch-na-ti* 'quiescere' guarantee the existence of the pair. Another instance of verbal opposites which have exercised influence upon one another may be: Sk. *pūrṇā*, Avest. *parəna* 'full': Sk. *ūnā*, Avest. *ūna* 'wanting.' The use of the rarer participial suffix *no* in both need not be accidental. For Germ. *rasten* and *hasten* see above; for the parallelism between I. E. *keītai* (Ved. *ḡēte*, *keītai*) and I. E. *ēstai* (Ved. *āste*, *ḡstai*) see Brugmann, Grdr. II 891-2.

#### IV. *Congeners in the widest sense.*

The broad categories of nominal and verbal word-making are the most fruitful field of congeneric assimilation and adaptation. Not only those which readily suggest themselves, such as designations of animals, plants, colors, parts of the body, etc., but also such as are hardly categorized consciously at all, as e. g. the Greek words which share the quality of hollowness, mentioned above (p. 419), or the words in *-eries*, formed to designate exhibitions (above, p. 411). Professor E. W. Fay draws my attention to the interesting rhyming triplet, Germ. *heu*, *streu* and *spreu*. The connective idea is 'dry grass.' The materials in this category are destined in the immediate future to accumulate very largely, to the great advantage of speech-history. I shall present

here some observations of this sort, some of which may claim the merit of novelty. Nhg. *wacholder* 'juniper,'<sup>1</sup> Ohg. *hiefaltra* 'wild brier,' Ohg. *mazzaltra* 'massholder, maple,' Ohg. *affaltra*, *apholtra* 'apple tree,' direct attention to the existence at a very early Germanic period of a 'suffix' *altra*, designating shrubs and trees. For the last three cf. Brugmann, Grundriss, II 99 ff. The element *-tra*, *-der* is 'tree'; the syllable *al* preceding it seems borrowed from the combination *affal-tra*, *aphol-tra*, i. e. it belongs by rights only to the word 'apple, apfel.' I have drawn attention above (p. 429, note) to the development of another suffix for certain plants: I. E. *so* in Ved. *vetasá* 'reed,' *atasá* 'jungle,' *yávasa* 'grass,' *avasá* 'fodder' = Obg. *ovīsū* 'oats.' I. E. *dēru*, *dru* 'tree' seems to correspond with European *vidhu* 'wood' (Fick, I<sup>4</sup> 554), Ved. *sváru* 'post' (Fick, I<sup>4</sup>, p. 154), and Lat. *veru* 'spit,' Gr. βαρύες δένδρα (Fick, I<sup>4</sup>, p. 404). The suffix *u* seems to continue a certain productivity in that direction in Ved. *p̥tū(-dāru)*, *p̥tū(-dāru)* = *deva-dāru* 'deodar tree,' and *c̥pū(-dru)*, AV. vi 127. 2. In addition to these the stem *perqu* in Lat. *quercu*, for which see Hirth, Idg. Forsch. I 479 ff.

In the domain of designations of animals we may note the groups, Gr. ἰκτίος 'kite' (cf. Ved. *ξyená* 'eagle'), ἐχίος and ἐχίνος 'hedge-hog,' and καρκίνος 'crab'; Ved. *jaśá* and *jhaśá* 'water-animal,' *yavāśa* and *yēvāśa* 'noxious insect,' *kāśkaśa* 'noxious insect,' and perhaps *dhvāñkša* 'crow.' To the Greek names of birds with ξ in the nominative add τέτριξ and τέτραξ 'grouse' (cf. Sk. *tittiri* 'partridge' and Gr. τέταρος, τέτροπος, τατύρας, τατύπος). See 'Adaptation,' p. 17. Fick (I<sup>4</sup>, pp. 88, 488) assumes upon the basis of Gr. φήνη 'a kind of eagle,' Sk. *bhāsa* 'bird of prey' an I. E. stem *bhans-* which rhymes with *ghans-* 'goose.'

To the long list of designations of parts of the body that avail themselves of the *r-n*-declension, I would now add Gr. ὠλέκρανον 'elbow,' λέκρانا τοὺς ἀγκῶνας (Hesych.), Lat. *lacertus* 'arm,' Lith. *alkūnė* 'elbow.' The I. E. declension seems to have been *ōleqr* : *aləqrnós*. The Greek forms are blends of the stems of the casus recti and obliqui; cf. Lat. *jecinoris* and the like. Among the words for color, Ved. *ṣitiñgá* 'white' (extended from *ṣiti* 'white'), *p̥iñgá* 'reddish brown,' *sārañga* and *sārañgá* 'variegated,' and *p̥iṣḍānga* 'reddish brown' exhibit an undoubted adaptation of the ending *-ñga* to words of color (cf. 'Adaptation,' p. 25). Cf. also

<sup>1</sup> Mhg. *wēcholler* (*wachandel*), *rēcholler* = *wacholder*; see KZ. XXXII 257.

Ved. *citrá* 'whitish,' Ohg. *heitar* 'heiter': *çvitrá* 'bright,' Lith. *szvitr-šiti* 'sparkle'; and Ved. *kádrū* 'reddish brown': *babhrú* 'reddish brown.' An interesting additional case of the attraction of an outside word to the category of nouns of relationship in *ar* (cf. 'Adaptation,' p. 23) is Ved. *vāvātar* 'favorite,' genitive *vāvātur*, RV. viii 1. 8, 16. The stem ordinarily is masc. *vāvāta*, fem. *vāvātā*. One of the two occurrences of *vāvātur*, RV. viii 1. 16, explains the formation without comment: *ā tv ādyā sadhā-stutiṁ vāvātuḥ sākhyur ā gahi* 'come hither to-day to the chorus of praise, instituted by thy favorite friend.' The word *sākhi* 'friend,' which itself has joined secondarily the band of words for relationship in *ar*, has recruited in this one hymn the word *vāvāta*; cf. our remarks on the rôle of alliteration in these processes, above.

Less salient lexical categories are suggested by Ved. *drapsá* 'drop': *utsa* 'spring, well'; Avest. *garənu* 'itch' (Ved. *gr̥dhnu* 'eager'): Avest. *tafnu* 'fever'; Ved. *kitāsa* 'leprosy': *balāsa* 'consumption of the throat.' The English word *visitation* has assumed a pejorative value, following perhaps words like *tribulation*, *consternation*, or others; similarly, German *schimpfieren* helps to advance the movement of the French suffix *ieren* in *cujonieren*, *maltraitieren*, *sekieren* towards adaptation as a pejorative.

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